

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE UPGRADE OF AN INTERSECTION CONTROL BEACON TO A FULLY ACTUATED TRAFFIC SIGNAL AT THE INTERSECTION OF MD 140 AND BETHEL ROAD IN CARROLL COUNTY. MD 140 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A SIX PHASE, FULL-TRAFFIC ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR MD 140.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED, EIGHT-PHASE NEMA CONTROLLER IN A BASE MOUNTED CABINET WILL BE USED.

PHASING CHART

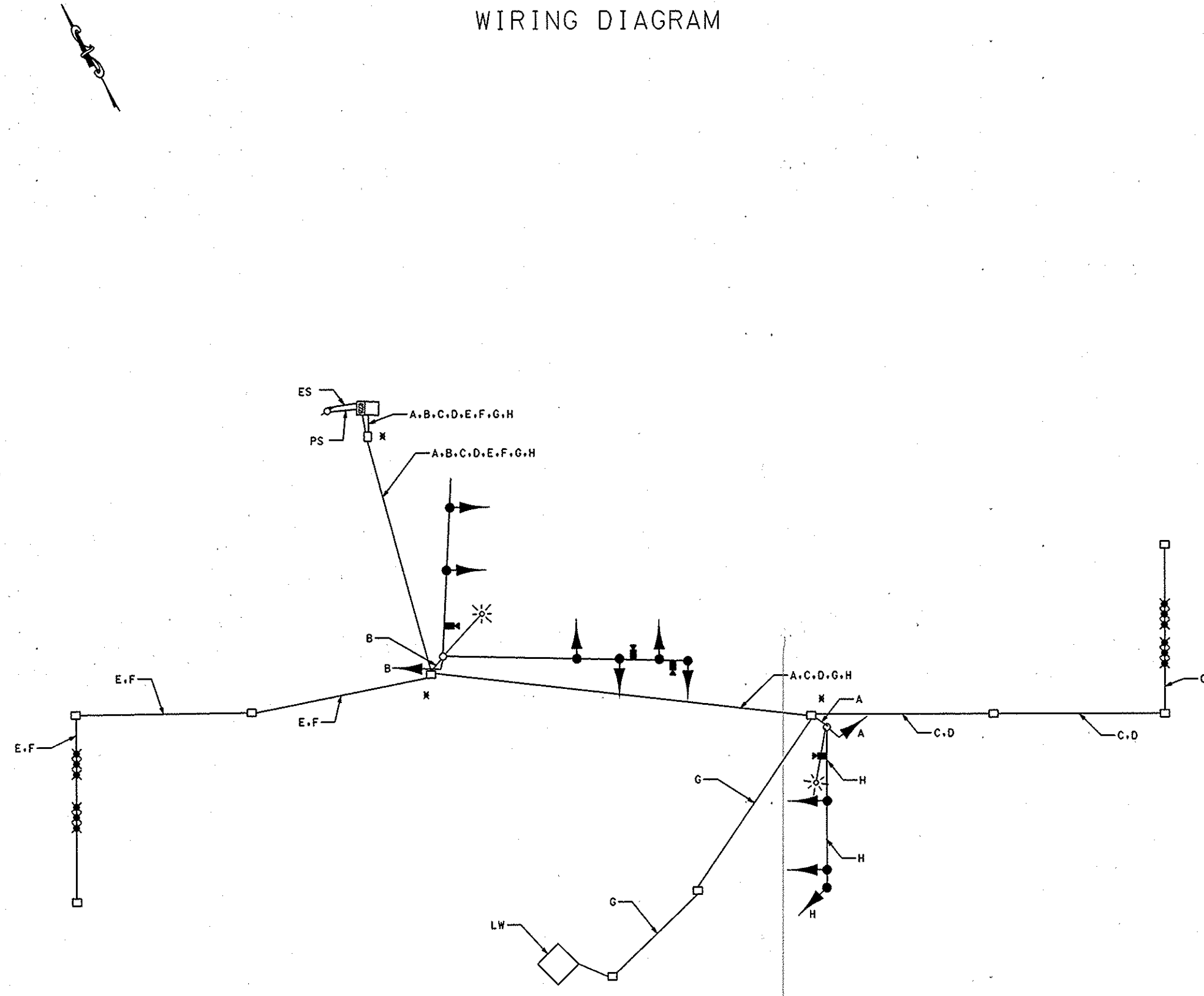
	1	2	3	4	5	6	7	8	9	10	11
	0	0	0	0	0	0	0	0	0	0	0
PHASE 1 & 5	G	G	R	G	G	R	R	R	R	R	R
1 & 5 CHANGE	G	G	R	G	G	R	R	R	R	R	R
PHASE 1 & 6	G	G	G	R	R	R	R	R	R	R	R
1 CHANGE	G	G	G	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G	G	G	R	R	R	R	R
5 CHANGE	R	R	R	G	G	G	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
130 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
32 EA	FURNISH AND INSTALL 12 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
9 EA	FURNISH AND INSTALL 8 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
4 EA	FURNISH AND INSTALL NON-INVASIVE MICRO-LOOP PROBE SET WITH 1000 FT. LEAD-IN
LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
4 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
1 EA	FURNISH AND INSTALL VIDEO INTERFACE EQUIPMENT
314 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 IN. X 6 IN.)
680 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
2 EA	FURNISH AND INSTALL 4-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
4 EA	FURNISH AND INSTALL W3-3 SIGN (48" X 48") - GROUND MOUNT
4 EA	FURNISH AND INSTALL D3-3 SIGN (72" X 24") - GROUND MOUNT
1 EA	FURNISH AND INSTALL M3-2 SIGN (24" X 12") - GROUND MOUNT
1 EA	FURNISH AND INSTALL M3-4 SIGN (24" X 12") - GROUND MOUNT
2 EA	FURNISH AND INSTALL M1-6 SIGN (30" X 24") - GROUND MOUNT
1 EA	FURNISH AND INSTALL M5-1(L) SIGN (21" X 15") - GROUND MOUNT
1 EA	FURNISH AND INSTALL M6-2(R) SIGN (21" X 15") - GROUND MOUNT
10 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT, FLEXIBLE, NON-METALLIC CONDUIT
120 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING
30 LF	FURNISH AND INSTALL SAWCUT
400 LF	FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
100 LF	FURNISH AND INSTALL 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
6 EA	REMOVE AND DISPOSE OF EXISTING SIGNS
2 EA	REMOVE EXISTING PAVEMENT MARKING ARROW

WIRING DIAGRAM



WIRING KEY

- A-B 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
C-F MICRO-LOOP PROBE LEAD-IN
G 2 CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
H 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
TS TELEPHONE SERVICE
LW LOOP WIRE (NO. 14 A.W.G.)

NOTE: 1. WITH THE EXCEPTION OF THE MICRO-LOOP PROBES AND THE POLE MOUNTED TRAFFIC SIGNALS EXISTING WIRING WILL BE USED.
2. INSTALL 5 CONDUCTOR ELECTRICAL CABLE BETWEEN SIGNAL HEADS AS NEEDED.

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS:

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(301) 624-8141

MR. RAY JOHNSON
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(301) 624-8106

MR. ANDREA ABEND
ASSISTANT DISTRICT ENGINEER - UTILITIES
(301) 624-8110

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR.
CHIEF, TRAFFIC OPERATIONS
(410) 787-7630

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
(410) 787-7676

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS
(410) 787-7631

MS. DARLENE EIDE
SUPPLY OFFICER
SIGNAL SHOP WAREHOUSE
(410) 787-7668

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
(410) 787-7652

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

TRAFFIC CONCEPTS, INC.
325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101
FAX (410) 923-6473
EMAIL TRAFFIC.CONCEPTS@COMCAST.NET

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 140 AT BETHEL ROAD

SCALE	NONE	DATE	3-2-06	CONTRACT NO.	BW996M82
DESIGNED BY	T. ZAYDEL	COUNTY	CARROLL		
DRAWN BY	T. ZAYDEL	LOGMILE	06014005.04		
CHECKED BY	K. SCHMID	T.I.M.S. NO.	H333		
F.A.P. NO.		TOD NO.			
DRAWING NO.	TS-4243 A GI	SHEET NO.	2	OF	2